

MANUELA: Developing an integrated database on meiofauna to perform joint analyses

By Leen Vandepitte

MANUELA – one of the nine Theme 1 RMPs – is cruising ahead. As all delivered meiofaunal datasets have recently been integrated into one single database, an enthusiastic crew of meiofaunal researchers has started their joint analysis. Here, we present you with an overview of the integrated database from the data manager's point of view.

VLIZ – as the data management team within MarBEF – has once again taken on the challenge to compose an integrated database. With the expertise built up during the compilation of the soft-bottom macrobenthos database (MACROBEN), we now concentrated on developing an integrated database to capture the meiofaunal information collected within the framework of the MANUELA RMP (Meiobenthic and Nematode biodiversity – Unravelling Ecological and Latitudinal Aspects). Data collection for the MANUELA project started in December 2005 and ended in February 2007. During this period, twelve institutes delivered a total of 86 datasets, mainly consisting of nematode and copepod related data (Figure 1). MANUELA has not only been actively involved in the process of data integration, but it has also taken on a small role in data rescue, as some of the delivered datasets only existed as paper versions and thus needed digitising before their integration.

All this fragmented information has been integrated into a central database. The scientists involved in the MANUELA project have performed a preliminary analysis on this integrated database in January 2007, giving them the opportunity to get familiar with the content and to indicate possible shortcomings. After dealing with their remarks, the integrated

database was released to the MANUELA scientific community in early April 2007. These meiofaunal researchers now face the challenge of performing a joint analysis on this database. A first insight from the scientific point of view will be presented in the next issue of this newsletter.

The MANUELA database contains a grand total of 140,431 distribution records, representing some 1,850 unique taxa. Table 1 provides a short numerical overview of the content of this database. Sampling locations vary from the intertidal to the deep sea and this both in marine and brackish environments. Although there is a strong focus on the European waters (e.g. North Sea and Mediterranean), samples taken in the Arctic and Antarctic regions as well as samples from the African and Australian coasts are included, giving the whole a somewhat global scope (with the exception of North and South America).

One of the deliverables of the MANUELA project to MarBEF was to make sure that all European nematode species names present in the integrated database were also present in the European Register of Marine Species (ERMS) (Figure 2). During this update in September 2006, 333 nematode taxa were added to ERMS, bringing the nematode taxa

Table 1. Database overview

Data-providing institutes	12
Datasets	86
Stations	1,448
Samples	5 638
Distribution records	140,431
Biometrics	38,362
Unique taxa	1,864
Sampling methods	29
Abiotic readings	21,325
Nematode taxa new for ERMS	333
Distribution records delivered to EurOBIS	38,132

within ERMS to a grand total of 2,173 (as of 13th September 2006).

In November 2006, another deliverable for MANUELA was met: information on the distribution of meiofaunal taxa within the MANUELA database was transferred to the European node of OBIS for 35 of the received datasets. A total of 38,132 distributions were added to EurOBIS. For 25 of these 35 datasets, not only the distribution information was made available, but also the individual taxon counts per location. For a number of other datasets, data providers have asked us to temporarily withhold the information from EurOBIS, as the data are still being processed for publication. In this light, and the fact that we have received a number of datasets later than November 2006, a second call to deliver data to EurOBIS will be launched to our data providers in November 2007, giving everyone the opportunity to still make their distribution data widely available through EurOBIS.

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Figure 2. Copepods *Oithona similis* and *Oithona atlantica* (© Slawomir, Kwasniewski). From the MarBEF species gallery (www.marbef.org/modules.php?name=Photogallery&album=411&pic=9048 (copepoda).

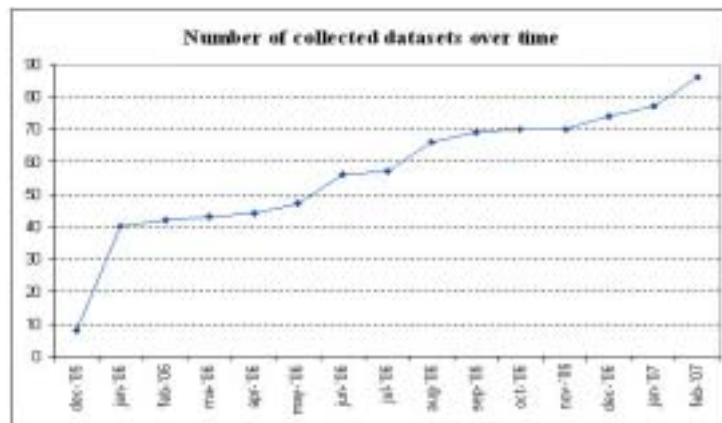


Figure 1. Number of collected databases over time.

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